Editorial

Dear Readers,

Welcome to our last issue of the year (Volume 16, Issue 4) for the *Journal of STEM Education: Innovations and Research*. Readers will find that our authors' excellent research continues and that the newest issue features eight exciting articles that describe new approaches to improving students' learning through hands-on experiences and exposure to real-world case studies, as well as a special thank-you to our reviewers from the past year.

In "A Case for the Need of Using Scaffolding Methods in Teaching Introductory, Fundamental Engineering Mechanics Classes," Peggy Boylan-Ashraf, Steven Freeman, and Mark Shelley of Iowa State University explore the benefits of student-centered teaching through scaffolding pedagogies in introductory and fundamental engineering classes.

In "Gender Differences in Conceptualizations of STEM Career Interest: Complimentary Perspectives from Data Mining, Multivariate Data Analysis and Multidimensional Scaling," Gerald Knezek of the University of North Texas analyze the gender differences in students' interest in STEM careers.

Carol Fabby of the University of Cincinnati compares students' scientific reasoning and problem solving skills to uncover trends of success in "Examining the Relationship of Scientific Reasoning with Physics Problem Solving."

"Redesigned High Schools for Transformed STEM Learning: Performance Assessment Pilot Outcome" by Jeremy Ernst, Virginia Tech, and Elizabeth Glennie, Research Triangle Institute, evaluates the success of the Redesigned High Schools for Transformed STEM Learning project.

In "STEM Learning Community: An Interdisciplinary Seminar for First- and Second-year College Science Majors," Jon Piper of Bethel College analyzes the effectiveness of a STEM Learning Community in students' academic and professional success.

Jacqueline Burgher reports on students' opinions of hands-on, active learning techniques in the classroom in her article titled "Implementation of a modular hands-on learning pedagogy: Student attitudes in a fluid mechanics and heat transfer course."

"Discovering the Needs Assessment of Qualified STEM Teachers for the High-Need Schools in South Texas," by Jeong Yang of Texas A&M University-Kingsville, analyzes results from a student/teacher survey on the needs of STEM education in southern Texas.

In "Teaching Steel Connections Using an Interactive Virtual Steel Sculpture," Saeed Moaveni of Minnesota State University and Karen Chou of Northwestern University explore the use of a virtual steel sculpture tool in civil and structural engineering courses.

As the year comes to a close, all of our readers can look upon the research of our authors and see the true accomplishments and learning among their students. I hope all of our readers have enjoyed reading about the innovations and research in this edition and have found helpful suggestions for their own classrooms. As always, we welcome comments, questions, and suggestions related to the journal, sent by email to jstemed@gmail.com.

Regards,

P.K. Raju

Editor-in-Chief